

**Méthode.**– Une recherche électronique de la littérature via Medline, The Cochrane Library et Google Scholar retrouve 169 publications de 1984 à avril 2013, dont 29 études correspondent aux critères d'inclusion (20 études avec tendinopathies non insertionnelles).

**Résultats.**– Même si son effet est variable, le renforcement excentrique procure une action bénéfique principalement sur la douleur dans les tendinopathies d'Achille chez les personnes sédentaires et sportives. Le niveau d'évidence est fort pour les tendinopathies non insertionnelles [3], alors que l'efficacité est plus discutable dans les tendinopathies insertionnelles [4].

**Discussion.**– Les données de la littérature sont très disparates [2], avec peu de patients et des protocoles qui diffèrent d'un centre à l'autre, ce qui rend difficile les études comparatives. Il apparaît cependant que les protocoles décrits par Stanish puis Alfredson soient les plus utilisés [1], sans qu'un consensus ne soit réellement établi. Dans la pratique, ceux-ci sont d'ailleurs souvent adaptés en fonction du patient. De plus, l'évaluation de la compliance au traitement est souvent négligée. Le critère principal évalué est l'amélioration des plaints douloureuses, avec un effet globalement significatif après 12 semaines de traitement par rapport aux autres thérapies conservatrices, surtout concernant les tendinopathies non insertionnelles [1], qui constituent la catégorie la plus étudiée. De nouvelles études randomisées contrôlées devraient être conduites afin de comparer l'efficacité des différents protocoles afin de dégager des recommandations de bonne pratique.

#### Références

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## Oral communications

### English version

CO50-001-e

### Use of platelet rich plasma in tendinopathy

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**Keywords:** Platelet rich plasma; Tendinopathy

The use of platelet rich plasma in sports medicine, as known a dramatically increased during last years. This practice, which concerns a blood product, is strictly supervised. In spite of a recent modification of the legislation, some important questions are remaining: Legal framework, definition of the product, and the rules of best practice Concerning the treatment for tendinopathy, the published results are changing with experimental conditions (in vitro or in vivo studies, animal or human experimentation).

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### Chronic tendinopathies: What we do know and what we don't know

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**Keywords:** Tendinopathy; Treatment

Chronic tendinopathy is known to be the Achilles' heel for both athletes and their clinicians. Although some textbooks incorrectly still refer to this non-

inflammatory overuse injury as 'tendinitis', the term 'tendinosis' has been adopted more widely to describe the underlying pathology and 'tendinopathy' as its clinical entity. Notwithstanding the progress made in the pathophysiological knowledge of chronic tendinopathy, its management represents a considerable clinical challenge.

There is limited evidence for some symptomatic measures and for the correction of intrinsic and extrinsic risk factors for tendinopathy. Firm evidence exists for the use of exercise therapy. The best results described in literature are obtained through the use of eccentric training programmes. However, so far no specific protocol or training programme can be selected from the evidence as optimal. Nevertheless, considering the (at least in part) reversible pathway of tendinopathy, strengthening programmes should represent the key issue in any therapeutic plan. Only when this basic treatment fails, several additional treatment options have been studied, though some more empirical than evidence based. Treatment modalities (e.g. extracorporeal shock wave therapy) as well as infiltration techniques (e.g. sclerosing injections, platelet-rich-plasma injections, corticosteroid injections, anesthetic volume injections, ...) have been put forward in literature. Surgical techniques have been restricted for complete therapy resistant cases of tendinopathy, mainly due to its invasiveness and unpredictable outcome. Recently, less invasive techniques, being more in correlation with the pathophysiology based conservative measures, aiming at the destruction of pathological innervation of the chronically overused tendon have been promoted.

In this lecture all these known therapeutic measures for chronic tendinopathy will be critically analysed regarding their pathophysiological sense and existing evidence.

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### Therapeutic news on the treatment of tendinopathies

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**Keywords:** Tendinopathy; Eccentric; Shock waves; Platelet-rich plasma

"Conventional" treatments of tendinopathies are generally employed empirically to fight pain and inflammation but they do not modify the histological structure of the tendon. However, these treatments are not completely satisfactory and the recurrence of symptoms is common.

In contrast to the passive pattern of many therapies dedicated to tendon disorders, some authors have promoted an eccentric training mode. Such active eccentric training programs are aimed at thwarting an aetiopathogenic theory proposing insufficient tensile strength of the tendon exposed to external loads which could progressively damage it. Though the literature remains incomplete on tendon architecture remodelling and real histological adaptations following an adapted eccentric training, clinical results following such therapy appear promising.

Due to its noninvasiveness, low complication rate and high applicability combined with good results, extracorporeal shock wave therapy has become a well known option within the therapeutic spectrum for many tendinopathies. More specifically, it has been successfully applied in chronic tendinopathy resistant to a conservative training program including eccentric exercises. Platelets release different cytokines and growth factors that could promote angiogenesis, tissue remodelling (bone, skin etc.), and wound healing. Platelet-rich plasma (PRP) is obtained by centrifuging autologous blood to have a high concentration of platelets depending on the isolation method. For this reason, different PRP preparation techniques cannot provide a consistently identical final product, but there is currently no international consensus on this issue. Despite the proven efficacy of PRP tissue regeneration in labs, there is currently little tangible clinical evidence for chronic tendon disorders. The few studies that have been performed appear unlikely to be comparable. Up to now, randomised controlled studies with appropriate placebo groups are needed to determine the real effectiveness of PRP for treating chronic tendon conditions. However, this therapeutic option remains very popular in sports, and many top

